

Some Additions to the Narrative, that was publish'd Numb. 58. about the Conjunction of the Ocean and Mediterranean by a Channel in France; In which Additions the Progress and the designed Usefulness of that great Undertaking are more amply represented: Out of a French Letter, written by Monsieur de Froidour to Monsieur Barrillon, and printed at Tholouse this very year.

IN the Description of this Channel, inserted in *Numb. 58.* of these *Traacts*, there was some mention made of the great *Magazin* of Water, for a continual supply in case of want thereof. This Store-house is more fully described in this Letter; where 'tis related, That it is in a Valley a little above the town of *Revel*, at *St. Feriol*; and that 'tis to be filled with the waters of the Rivolet *Audot*, and those of Rain and Snow, that are wont to be very plentiful upon the *Black-mountain*. This Valley is very narrow at the beginning, large in the middle, and streightened at the foot by the approach of two Rocky Hills, bounding it on both sides; which, to make a Lake and to keep in the water, are conjoyn'd by a *Causey* of such a height and thickness, that it may be call'd a third Hill. This *Causey* is 61 fathoms broad, and is to be 25 fathoms high, and 500 fathoms long, to gain the Hills on both sides. The *basis* of this great work is a solid Body of Masonry, laid, and every way enclosed within the rock. It hath only a small Opening below in the form of a Vault, which is even with the ground, to serve for a passage to the water of this *Magazin*: This passage is 9 feet large, 12 feet high, and 94 fathoms long. Upon this Body of Masonry, which by some fathoms exceeds the height of the said Vault or Aqueduct, there is raised a thick Wall from the top of this Dam, down in a streight line to the foot of it. This Wall incloseth within its thickness another Vault, in the manner of a Gallery; the entry whereof, being at the foot of the *Causey*, is of the same height and breadth with the former. This Gallery answers directly, from the top of the *Causey*, to the Orifice of the Aqueduct, 5 fathoms above the surface of the ground, and it runs down along the side, and on the left hand of the Mouth thereof.

On

On this work there are built three thick Walls a cross it, that go from one end of the Causey to the other, founded upon the Body of the Masonry, and running into the work of the Gallery, which they traverse cross-wise. They are ancred and enchased, on the right and the left, in the rocks of the two skirts of the Valley. The *first* Wall, which is at the beginning of the Causey, is 12 feet thick at the end, being much broader below by reason of the *Talus* or slope: It is to be but 12 fathom high. The *second*, to be more raised, is 3 fathoms thick, and 25 fathoms high: It stands very near in the midst of the Causey, 33 fathoms distant from the first. The *third*, which maketh the foot of the Causey, and is 31 fathoms off from the second, is 8 feet thick, and 15 fathoms high. The empty space between the first and second wall is to be filled with stones and earth well ramm'd together and made even, so that it may be cover'd with a bed of loam 6 feet thick, sloping, and insensibly descending from the second to the first Wall; that so the water, that shall be made to swell to the height of 20 to 25 fathoms, spreading it self upon this *glacis* or slope, and to lean every where on its center, may not spoil the Causey. In the like manner is to be filled up the empty space between the second and third Wall, descending also slope-wise from the second to the third, to serve for a buttress to the second, that is to bear all the weight and force of the Water.

All these Walls, and even those of the Gallery, are to be counter-walled by a Wall of two feet thickness. Besides, the Gallery is to be counter-vaulted by another Vault; and the intermediate empty spaces are to be done up with a clayie earth well ramm'd; that so, in case that by any extraordinary accident the water should come to make any gap in the loam-bed, that is between the first and second wall, the rest may by this means be preserv'd entire.

In the first Wall there are Stones in toothings, from the top to the bottom, on the right and left of the Aqueducts mouth, and of the Galleries window: And this is to make a Cavity chamber-wise, four foot square. The Wall of this little structure is to be six feet thick, counter-walled with another Wall two feet thick, with a loam-bed between, to keep it safe. It shall end on the top above the Gallery, slope-wise

and like a Vault, which is likewise to be counter-walled and counter-vaulted with clay between. This walled square Cavity is to be pierced by six or seven Metalline pipes, which shall be as big as those of Canons, and have their Orifices from without; thereby to receive the water of the Magazin to the height of the Gallery. The Cocks are to be within, shut up in the little space that the said Cavity is to contain, for to cast the water down so as it may have a fall of four fathoms. These Cocks shall be open'd through a window that is at the end of the Gallery. And there is to be yet another little aperture beneath, at which one may descend into this Chamber, in case the passage of the water shall be incombred, or that any other inconvenience is to be remedied. For which purpose there shall be fastned eight bars of Iron in the Walls, like a kind of stairs, for the conveniency of those that shall go down.

This Gallery is only to serve for passing to open the Cocks, according as there shall be need of water: And the water falling down will find issue through the Aqueduct, following the bed of the rivolet *Audot*, falling into the Deriving Channel below the Village *Vandreuil*.

It was necessary to place these Pipes so, as that they might not take the water but at about four fathoms high from the ground, because 'tis not possible to make such a great collection of waters in this Conservatory, especially of such waters as come, in part, from Snows and Rains, without store of dirt, sand, stones, pieces of wood, from the neighbouring Forests; and therefore there was an absolute necessity to leave some space for all this stuff, to prevent obstructing or spoiling the Pipes. On which occasion it is to be added, that forasmuch as in length of time this dirt may be heaped up to such a height, as to stop up the Pipes; to avoid this inconvenience, there hath been made in the said square Cavity an Opening below, answering to the Aqueduct; which Opening is to be commonly shut by a great Iron-gate, that can be drawn up, or opened at pleasure from the Gallery; that so the water finding this vent, and forcibly issuing, may carry with it all the dirt, or other stuff that shall be gathered at the bottom of this Store-house.

This

This Work is so well contrived and executed, that 'tis thought there never was seen in the world a Body of Masonry more solid than this; the charges of which are yet not considerable in proportion, because the Stones, Lime, Sand and Water are to be had upon the place.

As to the Grand *Bason*, to which the Waters of the Store-house are by the Channel of St. *Feriol* to be conveyed; the figure and compass of it having been already described in the *Transactions* above-mention'd; we find only these particulars to be added thereto, *viz.* That it is to be two fathoms deep all over; that it receives the waters of the said Channel at one of its Corners, and distributes them by two others, through two Channels, into the Ocean and Mediterranean; that there are moreover to be two other Channels; one to discharge the *Bason* when there is too much water; the other is not to come out of the *Bason*, but the Deriving Channel, to make the dirty waters, that it may bring down, to run out, that so the Pond receiving no other but clear and clean waters, may not be filled up with mud.

This *Bason* is in a manner quite done. For its ornament, it is to have not only an elegant key, but a regular Town built round about it after the model of the *Place Royal* of *Paris*; all the houses alike and equal, with great Arches beneath, to go under cover to the Key. There is also to be an Arsenal, for Boats to lye under, and for containing all necessaries to build and furnish them.

If any one shall ask, how far this Work is advanced, this Author assureth, that there is so much of it done, that before the end of this year it will be Navigable from the *Bason* to the *Garonne*. And if it should be doubted, whether the above-described Store-house will be sufficient to furnish water at all times; the same tells you, that the places are so disposed, that below that great Magazin one may make two or three more, and with little cost convey in Winter the superfluous waters of the same Rivers, that come out of the Black Mountain, into them, for a further supply.

This Royal Channel is every where five fathoms large at the bottom, and for the most part nine fathoms and two feet broad above. It is ordinarily between six and nine feet deep, and sometimes

sometimes more. And in regard that there is a considerable fall for about ten Languedoc-leagues, from the Point of Distribution (where 'tis highest) unto its discharge into the *Garonne*, where it is very low, you descend and ascend by the means of eighteen Sluses, which at certain distances do cut this Channel, and bear up the waters that are above.

But, as to the Communication of this Channel on the other side of the Great Basen towards the *Mediterranean*; that will require time: Yet the Work is there begun, and the same order and rules will be observ'd on that side, as on the other, as well for the opening of the Channels, as the structure of the Gates and Sluces. And here is not to be omitted, what is most important for this Communication, which is, That they have undertaken to make a Sea-port at Cape *Cette*, as the most convenient place on that Coast for such a purpose; and that there are already a thousand men working at it. *Cette* is a Promontory near *Frontignan*; on one side it hath the Sea, and on the other, the Lakes of *Thau*, *Magelonne*, and *Peraut*, bounded by the Plains of the lower Languedoc. The Sea there hath been found deep enough for Ships of five and six hundred Tuns; and round about the Cape there is 20, 21, 23, 24 feet of water. And here it is, where a *Mole* is not only begun to be made, but considerably advanced; insomuch that many Vessels lye there already with safety, there being not a day, but some Ship or other comes in for shelter; and others also come there to lade from *Genoa*, *Narbonne*, &c. And not long since it happen'd, that in a very violent Tempest on that Sea, there came in seventy Ships, and saved themselves here; and at another time, upon the like occasion, forty five Sail retired thither, and so escaped Ship-wrack: besides that the Ankage is very good on that Coast. All which giveth encouragement to build there a good Town; there being already made a number of small houses for Workmen to live in.

This Cape *Cette* is by a Cut of eight hundred fathoms joyn'd with the Deep Lake of *Thau*; which Cut is almost finish'd. And when altogether perfected, it will prove a considerable Harbour and place of Safety for those that navigate in this part of the Mediterranean, call'd the *Gulf of Lyons*, which extends it self from the Coast of *Provence* all along that of *Languedoc* and
Rosillon

Rouffillon unto Spain, and is so famous for Storms and Wracks ; Navigation being there the more dangerous , because the Southern Winds reigning in this Sea , and alwaies by their force driving the Ships, to the shore , these are in continual danger of splitting upon the Sands, for want of an Haven to retreat unto. So that by the Establishment of this Port , Navigation will in those parts be rendred much more safe , and a gate to Commerce opened to *Languedoc*.

But to speak in general of the main advantages, aim'd at by this Communication of the two Seas, there are three; *First*, that by this means *Languedoc* will be in a capacity of vending their Commodities of Oyles, Wines, Grains, Wool, in which that large Province abounds. *Secondly*, that whereas hitherto they have been obliged to carry all the Merchandises of the *Levant*, with great charge and danger, all along the coast of *Spain* round about , through the Straights of *Gibraltar* ; the same may henceforth be brought to *Bordeaux*, and other Ports of France lying upon the Ocean, by a much shorter, surer , and even, as 'tis thought , a cheaper way : However, the Boats that will be able to go in this Channel, can have no more than 8, 9 or 10 fathoms in length , and 2½ or 3 fath. in breadth. *Thirdly*, that henceforth a man may travel round about *France* by Water, save four days journey by Land. For by taking Boat at *Guyse* on the River of *Oyse* , lately made Navigable above *Fere*, one may descend unto its mouth, where it enters into the *Seine* ; and then , passing *St. Germain*, *St. Denis*, *Paris*, *Corbeil*, *Melun*, go up as far as *Montreau*, and there take the River *Yonne*, and go as far as *Auxerre* ; where you quit the River, and go by land to *Chalois*, seated on the *Soane* ; descending thence to *Lyons*, and so falling down to *Tarascon* : And having left the *Rhone*, take the *Robine* of *Aigues-mortes*, which is an ancient Channel, communicating from that River with the Lakes of *Languedoc* ; and so afterwards go up through the Channels of *Narbonne*, *Carcassone*, and *Castlenaudary* to *Tolouse* ; thence pass on the *Garonne* to *Bordeaux*, and there embarque , and coast it about that part of *France* which lyes upon the Ocean, and so re-enter the *Seine*, and see *Roan* and the other Towns lying on that River, until you come again to the mouth of the *Oyse* , whence you first parted.

So far the *first* Letter of M. *Froidour*; who in a Second to the same M. *Barillon* declareth, that they are convinced of the safety and usefulness of the Port of *Cette*, and that a great Trade is actually begun there: As also, that a stately Barge, expressly made for the solemnity, had, together with three of the greatest Vessels of the *Garonne*, passed with good success to *Naurouze*, the place whereabout the great Basin is. To which he adds, that if they continue to work at this Channel with the same care and fervour they now do, in two years time the whole Communication will assuredly be compleated.

In a *third* Letter the same person takes notice, that about six weeks before the time of the writing thereof, of three Ships of *St. Malo*, that were in a great Storm in the *Golf* of *Lyons*, two having been broken upon the Sands, for want of knowing the Port of *Cette*, the third, holding out somewhat longer, and seen from that Cape, and thence succour'd by some Chaloups, which advertis'd him that he was near the said Port, arriv'd there and was saved. He concludes this Letter, by assuring his Friend, that if the Channel were as well finish'd on the side towards the Mediterranean, as 'tis on that towards the Ocean, the Country of *Provence* might have drawn this year more than a Million by the sale of its Corn in *Malta*, *Sicily*, and many parts of *Italy*: And also, that the Undertakers did then resolve to wait upon the King, to give his Majesty an assurance of the success of this Work; and that none but ignorant and perverse Spirits can any more doubt of it.